



# Australian Bureau of Statistics

## 1350.0 - Australian Economic Indicators, 1994

ARCHIVED ISSUE Released at 11:30 AM (CANBERRA TIME) 01/11/1994

### 1994 Feature Article - Relative Earnings: Private and Public Sector

This article was published in Australian Economic Indicators November 1994 issue on 1 November 1994.

#### Introduction

The purpose of this article is to analyse differences between trends in the relative earnings of employees in the public and private sectors, taking into account the different skills and experience of employees within these sectors. No attempt has been made to explain the differences in the actual earnings for these two sectors.

The impetus for this analysis was the recommendation made in the Joint Committee of Public Accounts' report, "Managing people in the Australian Public Service - Dilemmas of Devolution and Diversity" (May 1993). The committee recommended that:

"The Australian Bureau of Statistics monitor the relative salaries of public sector employees against comparable categories in the private sector and publish this information regularly on an annual basis."

The analysis was undertaken using the annual Survey of Employee Earnings and Hours. This survey is conducted in respect of a pay period in May each year and collects information on the composition and distribution of earnings and hours of wage and salary earners in Australia.

Ideally, the earnings of public sector employees should be monitored against the earnings of private sector employees with comparable skills and experience. Appropriate measures of experience, such as age or length of employment, are unavailable from the Survey of Employee Earnings and Hours, as is educational attainment, which in conjunction with occupation would have provided an appropriate measure of skill. However, this survey collects information on the occupation of employees, which may explain to some extent broad differences in skills between the two sectors.

The majority of the analysis was undertaken on the average weekly total earnings of full-time adult employees. Weekly total earnings comprises payments of weekly ordinary time earnings plus weekly overtime earnings. Weekly ordinary time earnings are payments attributable to award, standard or agreed hours of work, while weekly overtime earnings are payments for hours in excess of award, standard or agreed hours of work.

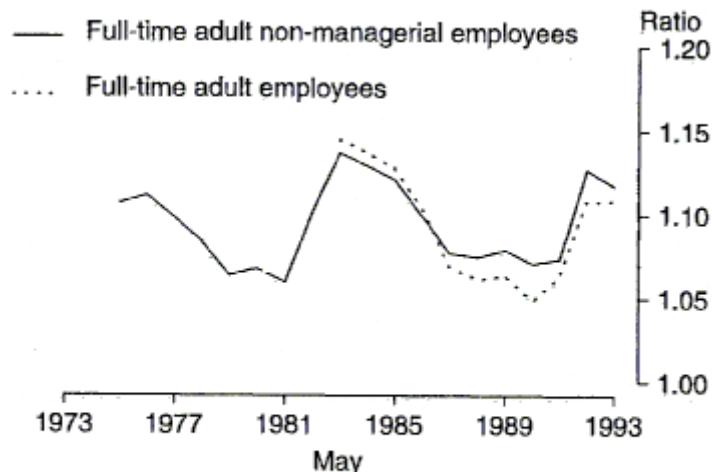
#### Trends in Earnings

##### Public vs Private Sector

Between May 1983 and May 1993, the average weekly total earnings (hereafter referred to as weekly earnings) of all full-time adult employees in the public sector were consistently higher than those of all full-time adult employees in the private sector. During this period, the weekly

earnings of public sector employees ranged between 4.4 and 14.4 per cent higher than the weekly earnings of private sector employees (Graph 1).

**GRAPH 1. RATIO OF PUBLIC TO PRIVATE SECTOR AVERAGE WEEKLY TOTAL EARNINGS(a)**



(a) The survey was not conducted in May 1982 or May 1984.

Source: ABS 6306.0 Annual data

The relative difference between public and private sector weekly earnings appeared to be greatest during and immediately after periods of recession (i.e. 1983-84 and 1992-93). These differences were primarily due to a slowdown in the growth of weekly earnings in the private sector during these more difficult economic periods. In addition to the fluctuations caused by the business cycle, there appeared to be a slight downward tendency in the relative weekly earnings over this ten year period. However, it is difficult to make any conclusions regarding a trend over this period of time, particularly since there was only one complete business cycle.

A longer series for weekly earnings is available for full-time adult non-managerial employees from May 1975 onwards. The interpretation as to whether an employee is managerial or non-managerial differs in the public and private sectors, and therefore this series may provide a slightly distorted measure of relative public to private sector weekly earnings. However, between May 1983 and May 1993, the ratio of public to private sector weekly earnings of full-time adult non-managerial employees displayed similar movements to the series for all full-time adult employees. Hence, the relative earnings of full-time adult non-managerial employees would appear to be suitable to analyse the trend in relative weekly earnings over a longer period.

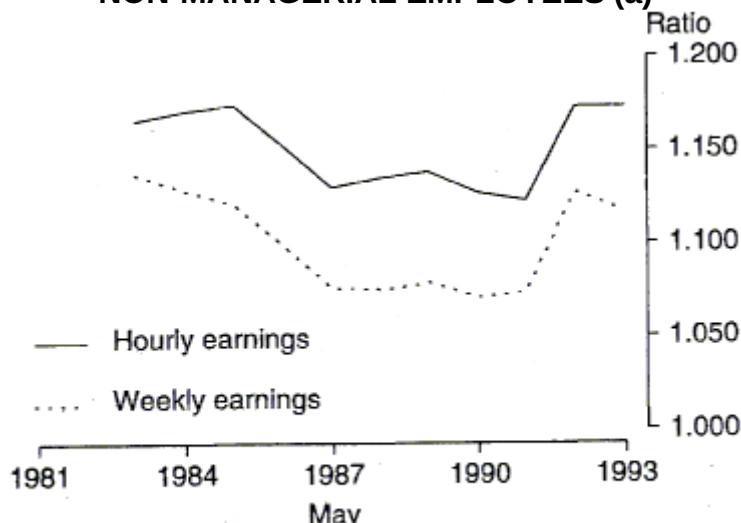
Apart from the fluctuations caused by the business cycle, there does not appear to be any tendency towards either increasing or decreasing relative weekly earnings between May 1975 and May 1993. This suggests that the apparent downward trend in relative weekly earnings of all full-time adults, between May 1983 and May 1993, was simply the effect of the business cycle.

Another factor which may impact on relative weekly earnings is the difference in average weekly total paid hours between the public and private sectors. Weekly total paid hours is the number of hours for which payments were made and comprises both ordinary time and overtime hours. Information on hours is generally not collected for managerial employees, and consequently, any analysis based on hours was restricted to full-time adult non-managerial employees.

The ratio of public and private sector average hourly total earnings (hereafter referred to as

hourly earnings) displayed a similar pattern to weekly earnings, although the ratio of hourly earnings was consistently higher. During the period May 1983 to May 1993, the hourly earnings of public sector employees ranged between 12.3 and 17.4 per cent higher than those of private sector employees (Graph 2).

**GRAPH 2. RATIO OF PUBLIC TO PRIVATE SECTOR EARNINGS FOR FULL-TIME ADULT NON-MANAGERIAL EMPLOYEES (a)**



(a) The survey was not conducted in May 1984.

Source: ABS 6306.0 Annual data

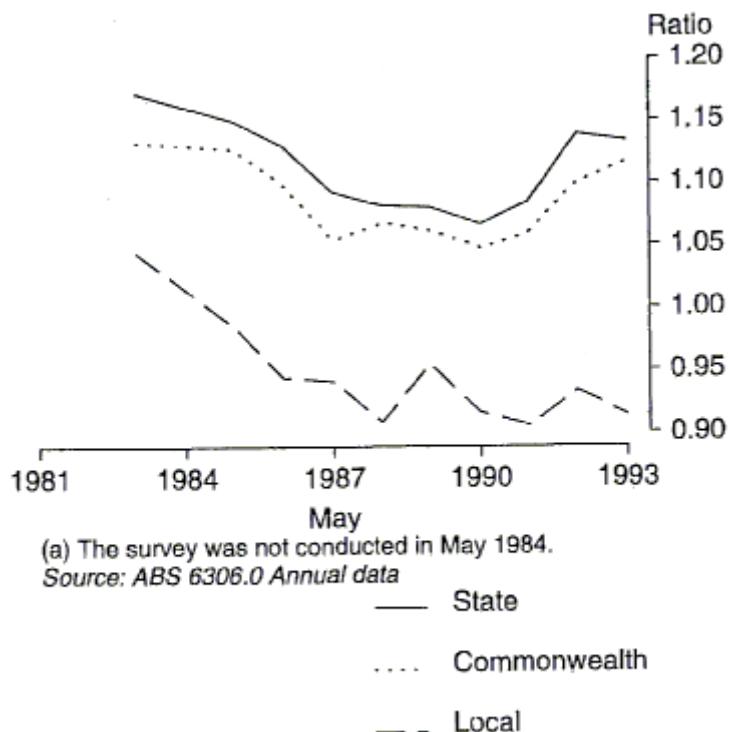
The higher ratio of public to private sector hourly earnings, compared with weekly earnings, was a result of the differences in the average weekly total paid hours in the two sectors. The average weekly total paid hours was consistently higher in the private sector than in the public sector.

### Level of Government

The public sector can be split into Commonwealth, State and Local Governments. In May 1993, 64.6 per cent of all full-time adult employees in the public sector worked for State Governments, 25.8 per cent for the Commonwealth Government and 9.5 per cent for Local Governments. The ratio of public to private sector weekly earnings of full-time adult employees was therefore dominated by the weekly earnings of State Government employees, and to a lesser extent Commonwealth Government employees. However, the trends in relative weekly earnings may differ substantially between these three levels of government.

Between May 1983 and May 1993, the weekly earnings of full-time adult employees in both the Commonwealth and State Governments were greater than weekly earnings in the private sector. In addition, weekly earnings for State Government employees were consistently 2.0 to 5.8 per cent higher than Commonwealth Government employees, although both sectors reacted similarly to the business cycle (Graph 3).

**GRAPH 3. RATIO OF PUBLIC TO PRIVATE SECTOR EARNINGS FOR FULL-TIME ADULT EMPLOYEES (a)**



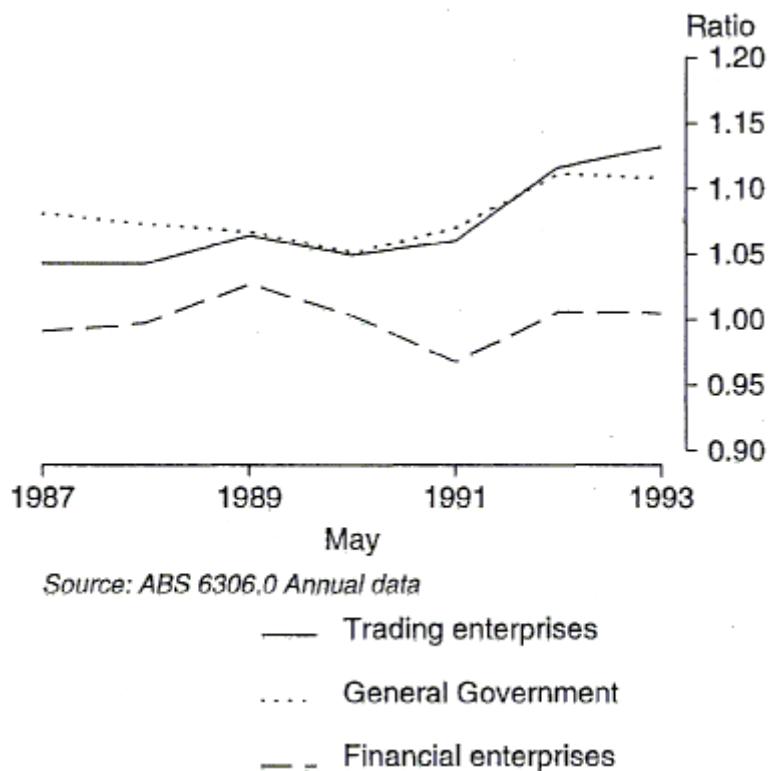
In contrast, weekly earnings for Local Government employees have been lower than the weekly earnings of private sector employees since May 1985. Moreover, the difference between weekly earnings of Local Government employees and private sector employees increased across this period. However, Local Government employees represented less than ten per cent of all public sector employees, and hence their effect on the ratio of public to private sector weekly earnings was relatively small.

### Public Institutional Sector

Information on the Public Institutional Sector, which allows the public sector to be split into General Government, Public Trading Enterprises and Public Financial Enterprises, is available only from May 1987 onwards. Of all full-time adult employees in the public sector in May 1993, 74.1 per cent were employed in General Government, 21.5 per cent in Trading Enterprises, and 4.4 per cent in Financial Enterprises. While the ratio of public to private sector weekly earnings is dominated by the weekly earnings of General Government employees, the trends in weekly earnings of employees in Public Trading and Financial Enterprises may differ from the trend in weekly earnings of the entire public sector.

There has been an increase in the weekly earnings of employees in Public Trading Enterprises relative to the private sector, most of which occurred between May 1991 and May 1993 (Graph 4). In contrast, the weekly earnings in Public Financial Enterprises were very similar to those in the private sector, ranging from 3.3 per cent lower than private sector weekly earnings to 2.7 per cent higher. However, employees in Public Financial Enterprises represented only 4.4 per cent of all public sector employees, and hence their effect on the ratio of total public to private sector weekly earnings was relatively small.

**GRAPH 4. RATIO OF PUBLIC TO PRIVATE SECTOR EARNINGS FOR FULL-TIME ADULT EMPLOYEES**



### **Changes in Occupational Composition**

The occupational composition of employment in the public and private sectors may have an effect on actual weekly earnings. Therefore, changes in the ratio of public to private sector weekly earnings over time may be explained to some extent by changes in the occupational composition of employment in these two sectors. The occupation of employees is currently classified according to the Australian Standard Classification of Occupations (ASCO). Prior to 1986, occupation was classified according to the Classification and Classified List of Occupations (CCLO), and as a result the following analysis is confined to the period May 1986 to May 1993.

Between May 1986 and May 1993, there were two distinctly different periods in terms of economic activity. The first, between May 1986 and May 1990, was a period of relatively high economic and employment growth, whereas the second, between May 1990 and May 1993, was associated with economic downturn and a decline in employment. Changes in the composition of employment and growth in weekly earnings, between May 1986 and May 1993, are best explained with respect to these two periods. The growth rate in weekly earnings for the private sector was particularly susceptible to business cycle fluctuations. Conversely, the growth rate in weekly earnings for the public sector was fairly stable, experiencing neither large increases during periods of strong economic growth nor significant slowdowns during harsh economic times. The annual average increase in weekly earnings for "all occupations" in the private sector was considerably less between May 1990 and May 1993 (3.3 per cent) than the annual average increase between May 1986 and May 1990 (7.5 per cent). In contrast, the annual average increase in weekly earnings of public sector employees remained fairly constant, at 6.2 per cent between May 1986 and May 1990, and 5.2 per cent between May 1990 and May 1993 (Table 1).

**TABLE 1. AVERAGE ANNUAL PERCENTAGE CHANGE IN TOTAL EMPLOYEES AND AVERAGE WEEKLY TOTAL EARNINGS FOR FULL-TIME ADULT EMPLOYEES, SECTOR AND OCCUPATION, MAY 1986 TO MAY 1990 AND MAY 1990 TO MAY 1993**

Occupation	1986-1990		1990-1993	
	Total employees	Average weekly total earnings	Total employees	Average weekly total earnings
<b>PUBLIC SECTOR</b>				
Managers and administrators	4.5	per cent 4.0	-3.6	8.3
Professionals	0.4	5.0	2.0	5.2
Para-professionals	0.8	6.3	3.8	4.1
Tradespersons	-6.0	6.9	-7.6	4.2
Clerks	0.4	6.6	-3.2	3.9
Salespersons and personal service workers	6.2	6.6	10.1	4.4
Plant and machine operators, and drivers	-2.7	6.1	-3.0	4.3
Labourers and related workers	-6.6	5.7	-6.6	4.9
All occupations	-0.8	6.2	-1.5	5.2
<b>PRIVATE SECTOR</b>				
Managers and administrators	7.6	per cent 7.4	-3.1	4.0
Professionals	4.7	7.5	7.6	3.8
Para-professionals	2.9	7.4	10.2	2.0
Tradespersons	0.6	7.7	0.1	2.1
Clerks	2.9	7.0	1.3	2.8
Salespersons and personal service workers	2.7	7.5	3.2	2.7
Plant and machine operators, and drivers	3.3	6.7	4.1	5.0
Labourers and related workers	-0.5	6.6	-3.3	2.7
All occupations	2.6	7.5	0.5	3.3

Source: Distribution and Composition of Employee Earnings and Hours (cat. no. 6306.0)

Between May 1986 and May 1993, the public and private sectors experienced significantly different changes in the occupational composition of employees. In the public sector, there were consistent decreases in the number of Tradespersons, Plant and machine operators and drivers, and Labourers and related workers, and small increases in the number of Professionals and Para-professionals. While in the private sector, the decreases in the number of Plant and machine operators and drivers, and Labourers and related workers occurred between May 1990 and May 1993 only, and the increases in the number of Professionals and Para-professionals were more substantial.

In both sectors, changes in the occupational composition of employees occurred in conjunction with changes in occupational growth rates in weekly earnings. The interaction of these changes may have had an impact on the relative weekly earnings.

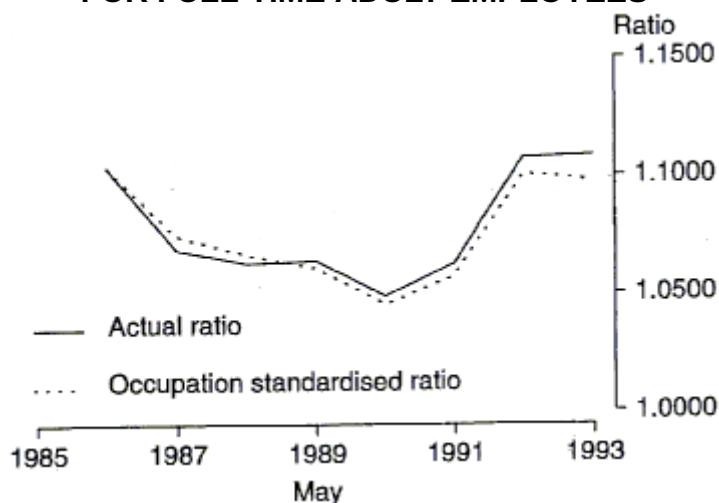
### Standardisation for Occupational Structure

The impact of changes in occupational composition of employees on the ratio of public to private sector weekly earnings can be further investigated by holding the occupational composition of employees in the two sectors constant at 1986 levels. This enables the actual change in relative

weekly earnings to be isolated from the impact of changes in occupational composition (ILO, 1992)

Between May 1986 and May 1993, there were changes in the occupational composition of employees in both the public and private sectors, with the occupational composition of employees in both sectors becoming more heavily weighted towards higher paid occupations. However, very little of the change in the ratio of public to private sector earnings can be explained by changes in the occupational composition of employees (Graph 5).

**GRAPH 5. RATIO OF PUBLIC TO PRIVATE SECTOR AVERAGE WEEKLY TOTAL EARNINGS FOR FULL-TIME ADULT EMPLOYEES**



### Distributional Change in Earnings

While the analysis undertaken so far has focussed on relative changes in average total weekly earnings, it is also important to consider the relative changes in the earnings distribution as a whole. The Theil index and the Gini coefficient (Slottje, 1989) are two measures which can be used to monitor the distribution of earnings (or earnings inequality) within a particular sector. An increase in the value of these two measures represents an increase in the spread or dispersion of the distribution of earnings. These measures are not appropriate for the direct comparison of earnings differentials between sectors, although it is possible to make comparisons of a more qualitative nature based on these measurements.

Between May 1983 and May 1993, the measured earnings inequality for full-time adult employees, using both the Gini Coefficient and the Theil Index, has been greater in the private sector than the public sector (Table 2). Although the measured earnings inequality has remained relatively constant in the public sector, it has increased steadily in the private sector.

**TABLE 2. GINI COEFFICIENT AND THEIL INDEX FOR AVERAGE WEEKLY TOTAL EARNINGS FOR FULL-TIME ADULT EMPLOYEES, SECTOR, MAY 1986 TO MAY 1993**

May	Public Sector		Private Sector	
	Gini coefficient	Theil index	Gini coefficient	Theil index
1983	0.176	0.023	0.189	0.030
1985	0.186	0.025	0.195	0.029

1986	0.186	0.025	0.205	0.032
1987	0.178	0.023	0.208	0.033
1988	0.178	0.023	0.218	0.036
1989	0.181	0.024	0.218	0.036
1990	0.179	0.023	0.221	0.037
1991	0.180	0.024	0.224	0.039
1992	0.183	0.025	0.224	0.040
1993	0.186	0.026	0.228	0.042

Source: Distribution and Composition of Employee Earnings and Hours (cat. no. 6306.0). Note the survey was not conducted in 1984

The measured earnings inequality in the private sector increased as a result of employees at the top end of the earnings distribution obtaining larger relative increases in weekly earnings than employees at the bottom end of the earnings distribution (Table 3). In the public sector, the largest relative increases in weekly earnings occurred in the middle of the earnings distribution, and hence the measured earnings inequality remained relatively constant.

**TABLE 3. AVERAGE ANNUAL PERCENTAGE CHANGE IN AVERAGE WEEKLY TOTAL EARNINGS FOR FULL-TIME ADULT EMPLOYEES, SECTOR AND EARNINGS DECILE, MAY 1983 TO MAY 1993**

Earnings decile	Public sector	Private sector
10	5.44	5.25
20	5.71	5.35
30	5.89	5.59
40	6.10	5.83
50	6.24	5.99
60	6.10	6.16
70	6.04	6.46
80	5.91	6.57
90	5.97	6.84

Source: Distribution and Composition of Employee Earnings and Hours (cat. no. 6306.0). Note the survey was not conducted in 1984

In the private sector, measured earnings inequality was highest for Managers and administrators, and was lowest for Clerks. The increase in measured earnings inequality was greatest for Managers and administrators, and there was also a marked increase for Professionals. For all other occupation groups there was little or no increase in measured earnings inequality, apart from Labourers and related workers, where earnings inequality decreased between May 1986 and May 1993.

In the public sector, there was very little difference in measured earnings inequality between occupation groups. There were small increases in measured earnings inequality for Tradespersons, Salespersons and Personal service workers and Labourers and related workers, which were offset by small decreases for Para-professionals.

## Conclusion

In summary, there did not appear to be any long-term trend towards either increasing or decreasing relative public to private sector weekly earnings over the period May 1983 to May 1993. However, the business cycle did appear to impact upon relative weekly earnings, primarily

due to its effect on private sector weekly earnings. The trends in weekly earnings differed slightly for different components of the public sector, most notably for Local Governments and Public Financial Enterprises. However, these components of the public sector have relatively small numbers of employees and hence have little impact on the overall trend in relative weekly earnings.

Structural changes in occupational composition of employees have also taken place in both the public and private sectors during this period, although these structural changes appear to have had very little impact upon the trend in relative weekly earnings.

There has been a trend towards increasing earnings inequality in the private sector. The spread of earnings has increased for Managers and administrators, and Professionals in particular. In contrast, the spread of public sector earnings appears to have remained relatively stable between May 1986 and May 1993.

This feature article was contributed by John Preston and Louise May, ABS.

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This page last updated 23 December 2009

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